Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

The following are Dr. Tarry's directions for accomplishing these purposes.

In a wine quart of rain or river water, infuse four ounces, troy weight, of bruised galls, letting them stand in the sun four hours in summer, or six in winter. Strain off the liquor, and let it stand five or six months, occasionally removing the mother that forms on the top, and finally separating both this and the sediments by filtering through paper. In the filtered liquor dissolve a troy ounce of powdered gum arabic. After this is completely dissolved, add a troy ounce of sulphat of iron, commonly called green vitriol, which has been first calcined till it grows reddish, and finely powdered. Continue shaking the mixture, till the vitriol is entirely dissolved. Care must be taken in calcining the vitriol, which may very conveniently be done in an iron ladle, or in a fireshovel, that it is not brought to a full red, as in this state a great portion of it will be insoluble.

With regard to the composition of the indelible ink we are sorry to say, that Dr. Tarry has thought proper to keep it secret. He only informs us that it contains neither galls, nor logwood, nor brazil, nor gum, nor any preparation of iron; that it is entirely vegetable; and that it resists the action of the most powerful acids, of alkaline solutions in their most concentrated state, and of all solvents. He sells it in a solid form; and for use it is to be mixed accurately in a mortar with eight parts of water, and then put into a bottle, left at least one third empty for the purpose of shaking it, which is to be done every six or eight hours for a couple of days. It soon softens quills, but metallic pens are well adapted to it, as it contains no acid. It contains nothing deleterious. The action of nitric acid on it is very trifling. Oxymuriatic acid changes any thing written with it to the colour of goose dung; and often this caustic alkali renders it of a steel gray: but to produce these effects it must be steeped in them a long time, and the form of the letters then remains unchanged.

The ink has been examined by a committee of the French Institute, who confirm the report of Dr. Tarry with respect to its qualities; but they add, that it requires to be shaken every time it is used, as the colouring matter soon subsides to the bottom.

Account of a preservative Stucco, invented by the late Mr. Bachelier.

The speedy alteration of the stones employed in the principal buildings at Paris, and the inconveniences of renewing their surfaces from time to time by scraping them, induced Mr. Bachelier to propose to the superintendant of the royal buildings to make trial of a preservative stucco. In consequence, three pillars in the court of the Louvre were coated with this stucco to half their height, in 1755; and the parts coated remain in the highest preservation to the present day, being strikingly distinguished by their uniform tint, contrasted with the dull, grey, and earthlyaspect of the contiguous parts.

As the alterations making in the Louvre would necessarily destroy every trace of this experiment, some of the members of the Institute conceived it a matter of importance, that an investigation of it as far as possible should take place before it was too late, and accordingly a committee was appointed for the purpose.

On enquiry it was found, that Mr. Bachelier had no where left any account of his process in writing; but his son gave the committee all the information he could from memory, having seen his father prepare it;

and presented them with some sheets of paper, coated with the same preparation, which had been made for the purpose of receiving writing, that could be effaced with a sponge. The coating of this paper, and what could be scraped from the pillars, were analysed; and from the results of these analyses, the account given by the son, and various experimental trials subsequently made, the following appears to be an accurate description of the preparation, except perhaps with respect to the proportion of the ingredients, and in these Mr. Bachelier himself probably followed no precise rule.

The quantity of lime to be used at once, being determined on, this is to be slaked in as little water as possible, but enough to enable it to pass through a sieve not very fine, in order to separate the parts that will not slake. This is to be triturated with skimmed-milk cheese, to the consistence of a soft, smooth, and coherent paste; when calcined gypsum, equal to about two-fifths of the weight of the lime, and pure white lead equal to about one third, are to be added; and by farther grinding on the stone, with the addition of a little water, the whole is to be reduced to a pap, rather thick than fluid. Lastly, it is to be diluted with common water the moment of using it, which is to be done with a painters or varnishers brush.

Mr. Bachelier used oystershell lime, but good stone lime is probably not less efficacious. Care must be taken, that the white lead is not adulterated with whiting, as this would render the composition less adhesive. Indeed I am inclined to think, from the account given by his son, that he did not use ceruse, but employed a strong solution of sugar of lead instead of the water here directed. All the whey must be well pressed out of the cheese; and, if it be not fresh made, it should be left some time exposed to a moist air to soften. When used fresh, about a fourth of the weight of the other three ingredients will be a sufficient quantity. The coating laid on should be so thin, as not to injure the delicacy of the edges or indented angles of the finest sculpture.

On the Culture of the Potato in Hot-beds; by Thomas Andrew Knight, Esq. F.R.S., &c.

THE potato being now very extensively cultivated under glass, and with artificial heat, any improvement of its culture will probably prove acceptable to many readers of the Horticultural Transactions; and I am therefore induced to send the following account of some methods which I have practised with success, and which will, I believe, be found better than any at present generally known.

The varieties of potatoes, which are well calculated for early forcing, begin to vegetate before Christmas; and it is of consequence to preserve the germs and roots first emitted, from injury, where a crop of good potatoes is required before the end of May. I therefore plant my potatoes in pots of about six inches diameter, in January (a single potato in each), and the pots are then placed in the ground, and covered with litter, to protect them from frost; and in this situation they remain till the hot-bed is ready to receive them. In the mean time, the roots extend themselves through the mould within the pots, and the germs reach its surface; whilst the excitability of the plants is not at all expended, on account of the low temperature in which they vegetate: and, therefore, when plunged into the hot-bed, they instantly shoot with excessive rapidity, and in a few days begin to generate tubers. One